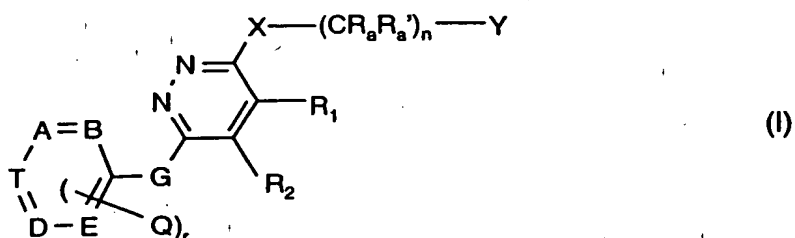


What is claimed is:

1. The use of a compound of formula I,



wherein

r is 0 to 2,

n is 0 to 3

R₁ and R₂

a) are independently in each case a lower alkyl;

b) together form a bridge of subformula I*,



wherein the bond is achieved via the two terminal C atoms and

m is 0 to 4, or

c) together form a bridge of subformula I**,



wherein one or two of the ring members T₁, T₂, T₃ and T₄ are nitrogen, and the others are in each case CH, and the bond is achieved via atoms T₁ and T₄;

G is -C(=O)-, -CHF-, -CF₂-, lower alkylene, C₂-C₆alkenylene, lower alkylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, -CH₂-O-, -CH₂-S-, -CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -CH₂-NH-CH₂-, oxa (-O-), thia (-S-), imino (-NH-), -CH₂-O-CH₂-, -CH₂-S-CH₂- or

$-\text{CH}_2-\text{NH}-\text{CH}_2-$;

A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N;

Q is lower alkyl, lower alkoxy or halogen;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is hydrogen, aryl, heteroaryl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, alkylphenylsulfonyl, or (alternatively or, in a broader aspect of the invention, in addition) selected from the group consisting of ureido, halo-lower alkylthio, halo-lower alkylsulfonyl, pyrazolyl, lower-alkyl pyrazolyl and $\text{C}_2\text{-C}_7$ alkenyl;

wherein – if more than 1 radical Z ($m \geq 2$) is present – the substituents Z are selected independently from each other;

and wherein the bonds characterized in subformula I* by a wavy line are either single or double bonds;

or an N-oxide of said compound, wherein 1 or more N atoms carry an oxygen atom; or a pharmaceutically acceptable salt thereof,

for the manufacture of a pharmaceutical preparation for the treatment of an inflammatory rheumatic or rheumatoid disease and/or pain.

2. The use according to claim 1, where in the compound of the formula I, or the salt thereof,

r is 0 to 2,

n is 0 to 3

R₁ and R₂

a) are independently in each case a lower alkyl;

b) together form a bridge of subformula I*,

wherein the bond is achieved via the two terminal C atoms and

m is 0 to 4, or

c) together form a bridge of subformula I**,

wherein one or two of the ring members T₁, T₂, T₃ and T₄ are nitrogen, and the others are in each case CH, and the bond is achieved via atoms T₁ and T₄;

G is -C(=O)-, -CHF-, -CF₂-, lower alkylene, C₂-C₆alkenylene, lower alkylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, -CH₂-O-, -CH₂-S-, -CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -CH₂-NH-CH₂-, oxa (-O-), thia (-S-), imino (-NH-), -CH₂-O-CH₂-, -CH₂-S-CH₂- or -CH₂-NH-CH₂-;

A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N;

Q is lower alkyl, especially methyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is hydrogen, aryl, heteroaryl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, alkylphenylsulfonyl, or (alternatively or, in a broader aspect of the invention, in addition) selected from the group consisting of ureido, halo-lower alkylthio, halo-lower alkansulfonyl, pyrazolyl, lower-alkyl pyrazolyl and C₂-C₇alkenyl;

wherein – if more than 1 radical Z (m ≥ 2) is present – the substituents Z are selected independently from each other;

and wherein the bonds characterized in subformula I* by a wavy line are either single or double bonds;

or an N-oxide of the defined compound, wherein 1 or more N atoms carry an oxygen atom.

3. The use according to claim 1, where in the compound of the formula I, or the salt thereof, r is 0 to 2,

n is 0 to 2,

m is 0 to 4,

R_1 and R_2

(i) are lower alkyl, especially methyl, or

(ii) together form a bridge in subformula I*,

the binding being achieved via the two terminal carbon atoms, or

(iii) together form a bridge in subformula I**,

wherein one or two of the ring members T_1 , T_2 , T_3 and T_4 are nitrogen, and the others are in each case CH, and the binding is achieved via T_1 and T_4 ;

A, B, D, and E are, independently of one another, N or CH, with the stipulation that not more than 2 of these radicals are N;

T is nitrogen;

G is lower alkylene, lower alkylene substituted by acyloxy or hydroxy, $-\text{CH}_2\text{-O-}$, $-\text{CH}_2\text{-S-}$, $-\text{CH}_2\text{-NH-}$, oxa ($-\text{O-}$), thia ($-\text{S-}$), or imino ($-\text{NH-}$);

Q is lower alkyl, especially methyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is aryl, pyridyl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, or alkylphenylsulfonyl, wherein – if more than 1 radical Z ($m \geq 2$) is present – the substituents Z are selected independently from one another;

and wherein the bonds characterized, if present, by a wavy line are either single or double bonds;

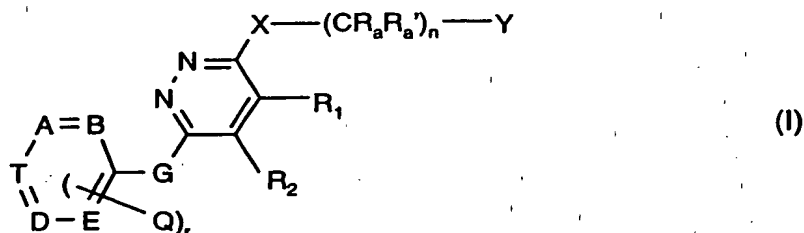
or an N-oxide of the defined compound, wherein 1 or more N atoms carry an oxygen atom.

4. The use according to claim 1, where the compound of the formula I is selected from the group of compounds consisting of

1-(4-chloroanilino)-4-(4-pyridylmethyl)phthalazine;
 [4-(4-chloroanilino)phthalazin-1-yl](pyridin-4-yl)methanol; and
 1-(4-chloroanilino) 4-[(1-oxypyridin-4-yl)methyl]phthalazine;
 or a pharmaceutically acceptable salt thereof.

5. The use according to any one of claims 1 to 4, where the disease to be treated is rheumatoid arthritis and/or pain.

6. A compound of formula I,



wherein

r is 0 to 2,

n is 0 to 2,

R₁ and R₂

a) are independently in each case a lower alkyl;

b) together form a bridge of subformula I*,

wherein the bond is achieved via the two terminal C atoms and

m is 0 to 4, or

c) together form a bridge of subformula I**,

wherein one or two of the ring members T₁, T₂, T₃ and T₄ are nitrogen, and the others are in each case CH, and the bond is achieved via atoms T₁ and T₄;

G represents

- i) C₂-C₆alkenylene, C₂-C₆alkylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, -CH₂-O-, -CH₂-S-, -CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -CH₂-NH-CH₂-, oxa (-O-), thia (-S-), imino (-NH-), -C(=O)-, -CHF- or -CF₂-; or
- ii) C₂-C₆alkylene if Q is lower alkyl, or
- iii) C₁-C₆alkylene if Q is lower alkoxy or halogen;

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A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N, and that T is only N when α) G is C₂-C₆alkenylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, or β) when Q is lower alkoxy or halogen;

Q is lower alkyl, lower alkoxy or halogen;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is hydrogen, aryl, heteroaryl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, or alkylphenylsulfonyl, wherein – if more than 1 radical Z ($m \geq 2$) is present – the substituents Z are selected independently of each other.

and wherein the bonds characterized in subformula I* by a wavy line are either single or double bonds;

or an N-oxide of said compound, wherein 1 or more N atoms carry an oxygen atom; or a salt thereof.

7. A compound of formula I according to claim 6,

wherein

r is 0 to 2,

n is 0 to 2,

R₁ and R₂

a) are independently in each case a lower alkyl;

b) together form a bridge of subformula I*,

wherein the bond is achieved via the two terminal C atoms and

m is 0 to 4, or

c) together form a bridge of subformula I**,

wherein one or two of the ring members T₁, T₂, T₃ and T₄ are nitrogen, and the others are in each case CH, and the bond is achieved via atoms T₁ and T₄;

G is C₂-C₆alkylene, C₂-C₆alkenylene, C₂-C₆alkylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, -CH₂-O-, -CH₂-S-, -CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -CH₂-NH-CH₂-, oxa (-O-), thia (-S-), imino (-NH-), -C(=O)-, -CHF- or -CF₂-;

A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N, and that T is only N when G is C₂-C₆alkenylene or is C₃-C₆alkenylene substituted by acyloxy or hydroxy;

Q is lower alkyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is hydrogen, aryl, heteroaryl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, or alkylphenylsulfonyl, wherein – if more than 1 radical Z ($m \geq 2$) is present – the substituents Z are selected independently of each other.

and wherein the bonds characterized in subformula I* by a wavy line are either single or double bonds;

or an N-oxide of said compound, wherein 1 or more N atoms carry an oxygen atom; or a salt thereof.

8. A compound of formula I according to claim 6,

wherein

r is 0 to 2,

n is 0 to 2,

R₁ and R₂ either

a) are independently in each case a lower alkyl;

b) or together form a bridge in subformula I*,

wherein the bond is achieved via the two terminal C atoms and

m is 0 to 4, or

c) together form a bridge in subformula I**,

wherein one or two of the ring members T₁, T₂, T₃ and T₄ are nitrogen, and the others are in each case CH, and the bond is achieved via atoms T₁ and T₄;

G is C₂-C₆alkylene, C₂-C₆alkenylene, C₂-C₆alkylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, -CH₂-O-, -CH₂-S-, -CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -CH₂-NH-CH₂-,

oxa (-O-), thia (-S-) or imino (-NH-);

A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N, and that T is only N when G is C₂-C₆alkenylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy;

Q is lower alkyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is hydrogen, aryl, heteroaryl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl-lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, or alkylphenylsulfonyl, wherein – if more than 1 radical Z ($m \geq 2$) is present – the substituents Z are chosen independently of each other;

and wherein the bonds characterized by a wavy line are either single or double bonds; or an N-oxide of said compound, wherein 1 or more N atoms carry an oxygen atom; or a salt thereof.

9. A compound of formula I according to claim 6, wherein

r is 0 to 2,

n is 0 to 2,

R₁ and R₂ together form a bridge in subformula I^a,

m is 0 to 4,

G is C₂-C₆alkylene, C₂-C₆alkenylene, C₂-C₆alkylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, -CH₂-O-, -CH₂-S-, -CH₂-NH-, oxa (-O-), thia (-S-) or imino (-NH-);

A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N, and that T is only N when G is C₂-C₆alkenylene or is C₃-C₆alkenylene substituted by acyloxy or hydroxy;

Q is lower alkyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is hydrogen, aryl, heteroaryl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, or alkylphenylsulfonyl, wherein – if more than 1 radical Z ($m \geq 2$) is present – the substituents Z are selected independently from one another;

and wherein the bonds characterized by a wavy line are either single or double bonds; or an N-oxide of said compound, wherein 1 or more N atoms carry an oxygen atom; or a salt thereof.

10. A compound of formula I according to claim 6, wherein

r is 0 to 2,

n is 0 to 2,

R_1 and R_2 together form a bridge in subformula I*,

m is 0 to 4,

G is C_2 - C_6 alkylene, C_2 - C_6 alkenylene, C_2 - C_6 alkylene or C_3 - C_6 alkenylene substituted by acyloxy or hydroxy, $-CH_2-O-$, $-CH_2-S-$, $-CH_2-NH-$, oxa ($-O-$), thia ($-S-$) or imino ($-NH-$);

A, B, D, and E are, independently of one another, N or CH, subject to the proviso that not more than 2 of these radicals are N, and T is CH;

Q is lower alkyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia;

Y is aryl, heteroaryl, or unsubstituted or substituted cycloalkyl; and

Z is mono- or disubstituted amino, halogen, alkyl, substituted alkyl, hydroxy, etherified or esterified hydroxy, nitro, cyano, carboxy, esterified carboxy, alkanoyl, carbamoyl, N-mono- or N,N-disubstituted carbamoyl, amidino, guanidino, mercapto, sulfo, phenylthio, phenyl-lower alkylthio, alkylphenylthio, phenylsulfinyl, phenyl-lower alkylsulfinyl, alkylphenylsulfinyl, phenylsulfonyl, phenyl-lower alkylsulfonyl, or alkylphenylsulfonyl, wherein – if more than 1 radical Z ($m \geq 2$) is present – the substituents Z are selected independently from one another;

and wherein the bonds characterized by a wavy line are either single or double bonds; or an N-oxide of the defined compound, wherein 1 or more N atoms carry an oxygen atom; or a salt thereof.

11. A compound of formula-I according to claim 6, wherein

r is 0 or 1,

n is 0 or 1,

R₁ and R₂ together form a bridge in subformula I*,

m is 0 or 1,

G represents

i) C₂-C₆alkenylene, C₂-C₆alkylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, -CH₂-O-, -CH₂-S-, -CH₂-NH-, -CH₂-O-CH₂-, -CH₂-S-CH₂-, -CH₂-NH-CH₂-, oxa (-O-), thia (-S-), imino (-NH-), -C(=O)-, -CHF- or -CF₂-; or

ii) C₂-C₆alkylene if Q is lower alkyl, or

iii) C₁-C₆alkylene if Q is lower alkoxy or halogen;

A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N, and that T is only N when α) G is C₂-C₆alkenylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, or β) when Q is lower alkoxy or halogen;

Q is lower alkyl, lower alkoxy or halogen;

R_a and R_{a'} are each independently H or lower alkyl;

X is imino, oxa, or thia,

Y is phenyl, which is unsubstituted or is substituted independently by one or two substituents from the group consisting of amino; lower alkanoylamino, halogen, lower alkyl, halogen-lower alkyl, lower alkoxy, phenyl-lower alkoxy, cyano, lower alkenyl, C₈-C₁₂alkoxy, lower alkoxy carbonyl, carbamoyl, lower alkylcarbamoyl, lower alkanoyl, phenyloxy, halogen-lower alkyloxy, lower alkoxy carbonyl, lower alkylmercapto, halogen-lower alkylmercapto, hydroxy-lower alkyl, lower alkylsulfonyl, halogen-lower alkylsulfonyl, phenylsulfonyl, dihydroxybora, 2-methylpyrimidin-4-yl, oxazol-5-yl, 2-methyl-1,3-dioxolan-2-yl, 1H-pyrazol-3-yl, 1-methylpyrazol-3-yl, and lower alkylendioxy bound to two adjacent C atoms;

Z is amino; N-lower alkylamino; hydroxy-lower alkylamino; phenyl-lower alkylamino; N,N-di-lower alkylamino; n-phenyl-lower alkyl-N-lower alkylamino; N,N-di-lower alkylphenylamino; lower alkanoylamino; or a substituent from the group consisting of

benzoylamino and phenyl-lower alkoxy-carbonylamino, wherein the phenyl radical in each case is unsubstituted or substituted by nitro, halogen, amino, N-lower alkylamino, N,N-di-lower alkylamino, hydroxy, cyano, carboxy, lower alkoxy-carbonyl, lower alkanoyl or carbamoyl; or is halogen; and,
the bonds characterized by a wavy line in each case represent a double bond or in the broader sense also a single bond;
or a salt thereof.

12. A compound of formula I according to claim 6, wherein

r is 0 or 1,

n is 0 or 1,

R₁ and R₂ together form a bridge in subformula I*,

m is 0 or 1,

B, E, D and T are each CH and A is N;

G is C₂-C₆alkylene or C₂-C₆alkenylene;

Q is methyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia,

Y is phenyl, which is unsubstituted or is substituted independently by one or two

substituents from the group consisting of amino; lower alkanoylamino, halogen, lower alkyl, halogen-lower alkyl, lower alkoxy, phenyl-lower alkoxy, cyano, lower alkenyl, C₈-C₁₂alkoxy, lower alkoxy-carbonyl, carbamoyl, lower alkylcarbamoyl, lower alkanoyl, phenyloxy, halogen-lower alkyloxy, lower alkoxy-carbonyl, lower alkylmercapto, halogen-lower alkylmercapto, hydroxy-lower alkyl, lower alkylsulfonyl, halogen-lower alkylsulfonyl, phenylsulfonyl, dihydroxybora, 2-methylpyrimidin-4-yl, oxazol-5-yl, 2-methyl-1,3-dioxolan-2-yl, 1H-pyrazol-3-yl, 1-methylpyrazol-3-yl, and lower alkylenedioxy bound to two adjacent C atoms;

Z is amino; N-lower alkylamino; hydroxy-lower alkylamino; phenyl-lower alkylamino; N,N-di-lower alkylamino; n-phenyl-lower alkyl-N-lower alkylamino; N,N-di-lower alkylphenylamino; lower alkanoylamino; or a substituent from the group consisting of benzoylamino and phenyl-lower alkoxy-carbonylamino, wherein the phenyl radical in each case is unsubstituted or substituted by nitro, halogen, amino, N-lower alkylamino, N,N-di-lower alkylamino, hydroxy, cyano, carboxy, lower alkoxy-carbonyl, lower alkanoyl or carbamoyl; or is halogen; and,

the bonds characterized by a wavy line in each case represent a double bond or in the broader sense also a single bond;
or a salt thereof.

13. A compound of formula I according to claim 6, wherein

r is 0 or 1,

n is 0 or 1,

R₁ and R₂ together form a bridge in subformula I*,

m is 0;

B, E, D and T are each CH and A is N;

G is C₂-C₆alkylene or C₂-C₆alkenylene;

Q is methyl;

R_a and R_a' are each independently H or lower alkyl;

X is imino, oxa, or thia,

Y is phenyl, which is unsubstituted or is substituted independently by one or two

substituents selected from the group consisting of amino; lower alkanoylamino; halogen, lower alkyl; halogen-lower alkyl; lower alkoxy; phenyl-lower alkoxy; cyano; lower alkenyl, C₈-C₁₂alkoxy, lower alkoxy carbonyl, carbamoyl, lower alkylcarbamoyl, lower alkanoyl, phenoxy, halogen-lower alkyloxy, lower alkoxy carbonyl, lower alkylmercapto, halogen-lower alkylmercapto, hydroxy-lower alkyl, lower alkylsulfonyl, halogen-lower alkylsulfonyl, phenylsulfonyl, dihydroxybora, 2-methylpyrimidin-4-yl, oxazol-5-yl, 2-methyl-1,3-dioxolan-2-yl, 1H-pyrazol-3-yl, 1-methylpyrazol-3-yl, and lower alkylenedioxy bound to two adjacent C atoms;

the bonds characterized by a wavy line in each case represent a double bond or in the broader sense also a single bond;
or a salt thereof.

14. A compound of formula I according to claim 6, wherein

r is 0;

n is 0;

R₁ and R₂ together form a bridge in subformula I*,

m is 0;

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A, B, D, E and T are independently N or CH subject to the proviso that at least one and not more than three of these radicals are N, and that T is only N when α) G is C₂-C₆alkenylene or C₃-C₆alkenylene substituted by acyloxy or hydroxy, or β) when Q is lower alkoxy or halogen;
G is ethylene, propylene or ethenylene;

R_a and R_a' are each independently H or lower alkyl;

X is imino,

Y is phenyl, which is unsubstituted or substituted by one or two substituents selected

independently from the group consisting of halogen; lower alkyl; and halogen-lower alkyl;

and

the bonds characterized by a wavy line are double bonds;

or a salt thereof.

15. A compound of formula I according to claim 6, wherein

r is 0;

n is 0;

R_1 and R_2 together form a bridge in subformula I*,

m is 0;

G is ethylene, propylene or ethenylene;

A is N and B, D, E and T are CH;

R_a and R_a' are each independently H or lower alkyl;

X is imino;

Y is phenyl, which is unsubstituted or substituted by one or two substituents selected

independently from the group consisting of lower alkyl; halogen; and trifluoromethyl; and

the bonds characterized by a wavy line are either single or double bonds;

or an N-oxide of said compound, wherein one or more N atoms carry an oxygen atom;

or a salt thereof.

16. A compound of formula I according to claim 11, wherein

r is 1;

n is 0;

R_1 and R_2 together form a bridge in subformula I*,

m is 0;

G is methylene;

T is N and A, B, D, and E are CH;

Q is lower alkoxy or halogen;

X is imino;

Y is phenyl, which is substituted by one or two substituents selected independently from the group consisting of lower alkyl; lower alkoxy; halogen; and trifluoromethyl; and

the bonds characterized by a wavy line are double bonds;
or an N-oxide of said compound, wherein one or more N atoms carry an oxygen atom;
or a salt thereof.

17. 1-(3-Methylanilino)-4-[(2-(pyridin-3-yl)ethyl]phthalazine of formula I according to claim 6,
or a pharmaceutically acceptable salt thereof.

18. A compound of formula I according to claim 6, selected from the group consisting of
E-1-(3-methylanilino)-4-[(2-(pyridin-3-yl)vinyl]phthalazine,
Z-1-(3-methylanilino)-4-[(2-(pyridin-3-yl)vinyl]phthalazine,
1-(3-methylanilino)-4-[(2-(pyridin-3-yl)ethyl]phthalazine,
1-(3-methylanilino)-4-[(2-(pyridin-4-yl)vinyl]phthalazine,
1-(4-chloro-3-trifluoromethylanilino)-4-[(2-(pyridin-3-yl)ethyl]phthalazine,
1-(4-chloroanilino)-4-[(2-(pyridin-3-yl)ethyl]phthalazine,
1-(3-chlorobenzylamino)-4-[(2-(pyridin-3-yl)ethyl]phthalazine,
1-(4-chloro-3-trifluoromethylanilino)-4-[3-(pyridin-3-yl)propyl]phthalazine,
1-(4-chloroanilino)-4-[3-(pyridin-3-yl)propyl]phthalazine,
1-(3-chloro-5-trifluoromethylanilino)-4-[3-(pyridin-3-yl)propyl]phthalazine, and
1-(4-*tert*-butylanilino)-4-[3-(pyridin-3-yl)propyl]phthalazine,
or in each case a pharmaceutically acceptable salt thereof.

19. A compound of formula I, or a pharmaceutically acceptable salt thereof, according to
any one of claims 6 to 18 for use in a method for the diagnostic or therapeutic treatment
of the human or animal body.

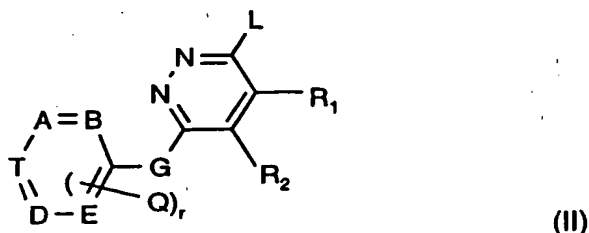
20. A pharmaceutical composition, comprising a compound of formula I or a
pharmaceutically acceptable salt thereof according to any one of claims 6 to 18, together
with at least one pharmaceutically acceptable carrier.

21. Use of a compound of formula I according to any one of claims 6 to 18, or a
pharmaceutically acceptable salt thereof, for the preparation of a pharmaceutical
composition for the treatment of a disease which responds to an inhibition of
angiogenesis.

22. Use of a compound of formula I according to any one of claims 6 to 18, or a pharmaceutically acceptable salt thereof, for the preparation of a pharmaceutical composition for the treatment of a disease which responds to an inhibition of VEGF-receptor kinase.

23. A method for the preparation of a compound of formula I according to claim 6, comprising

a) for the preparation of a compound of formula I, in which G is $-\text{CH}_2\text{-O}-$, $-\text{CH}_2\text{-NH}-$, $-\text{CH}_2\text{-S}-$, $-\text{O}-$, $-\text{S}-$, or $-\text{NH}-$, reacting a compound of formula II,

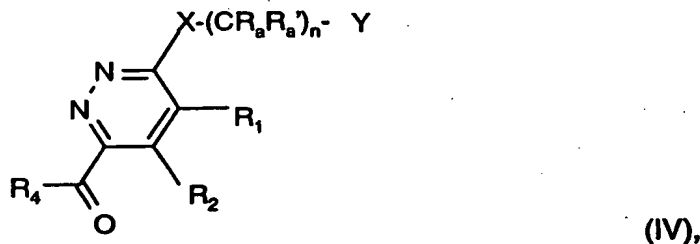


wherein A, B, D, E, T, G, Q, R₁, and R₂ are as defined for a compound of formula I and L is a nucleofugal leaving group, with a compound of formula III

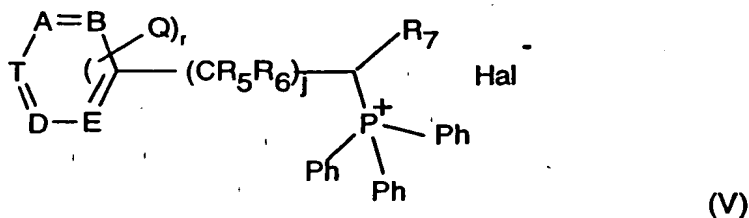


wherein n, R_a, R_a', X, and Y are as defined for a compound of formula I;

b) for the preparation of a compound of formula I, in which G is lower alkylene, especially C₂-C₆alkylene, C₂-C₆-alkenylene; or lower alkylene, especially C₂-C₆alkylene, or C₃-C₆alkenylene substituted by acyloxy or hydroxy; reacting a compound of formula IV,



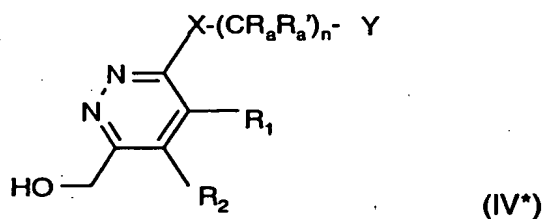
wherein n, R_a, R_a', X, Y, R₁ and R₂ are as defined for a compound of formula I, and R₄ is H or alkyl, in the presence of a base with a compound of formula V



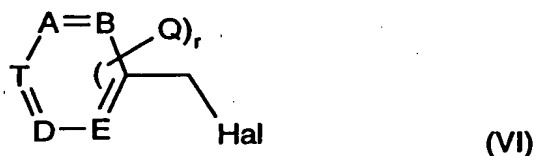
wherein r , A , B , D , E , T and Q are as defined for a compound of formula I, R_5 , R_6 and R_7 are independently alkyl or H, j represents a whole number between 0 and 5, and Ph is phenyl,

and reacting the resulting compound of formula I with $G = -CR_4=CR_7-(CR_5R_6)_j-$ if so desired by hydrogenation with side-group metal catalysis or addition of water and possibly subsequent acylation to form a different compound of formula I;

c) for the preparation of a compound of formula I in which G is $-CH_2-O-CH_2-$, reacting a compound of formula IV*,



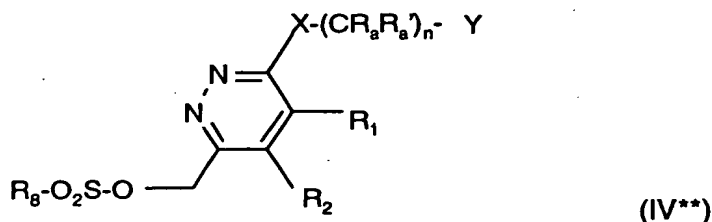
wherein n , R_a , R_a' , X , Y , R_1 and R_2 are as defined for a compound of formula I, in the presence of a base with a compound of formula VI,



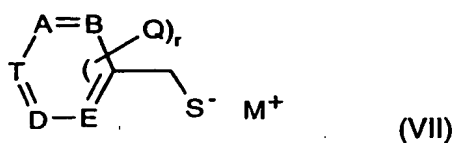
wherein r , A , B , D , E , T and Q are as defined for a compound of formula I and Hal is halogen;

d) for the preparation of a compound of formula I in which G is $-CH_2-S-CH_2-$, reacting a compound of formula IV**,

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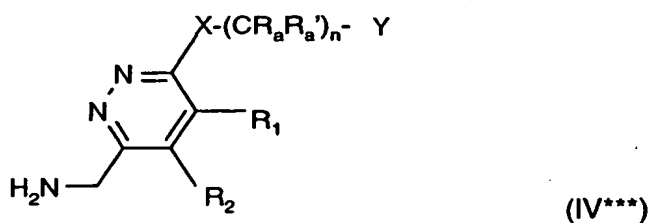


wherein n , R_a , R_a' , X , Y , R_1 and R_2 are as defined for a compound of formula I and R_8 is alkyl, for example methyl, or alkylaryl, for example tolyl, with a compound of formula VII



wherein r , A , B , D , E , T and Q are as defined for a compound of formula I and M^+ is a metal cation containing a single charge, for example a sodium or potassium cation;

e) for the preparation of a compound of formula I in which G is $-CH_2-NHCH_2-$, reacting a compound of formula IV***,



wherein n , R_a , R_a' , X , Y , R_1 and R_2 are as defined for a compound of formula I, with a compound of formula V*,



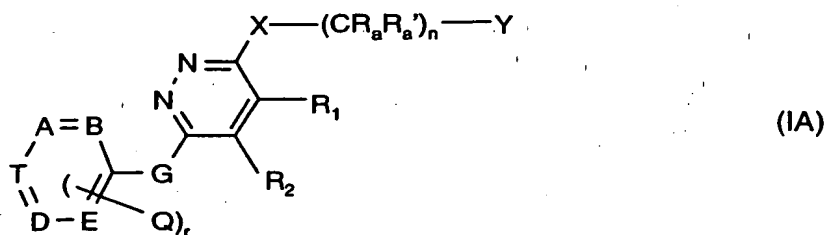
wherein r , A , B , D , E , T and Q are as defined for a compound of formula I, in the presence of hydrogen and a catalyst;

wherein in compounds of formulae I to VII, IV*, IV**, IV*** and V*, functional groups which do not participate in the reaction are present in protected form where necessary,

and removing any protective groups present, whereas said starting compounds may also be present in the form of salts if a salt-forming group is present and the reaction in salt form is possible;

and, if so desired, converting an obtainable compound of formula I or an N-oxide thereof into another compound of formula I or an N-oxide thereof, converting a free compound of formula I or an N-oxide thereof into a salt, converting an obtainable salt of a compound of formula I or an N-oxide thereof into the free compound or another salt, and/or separating a mixture of isomeric compounds of formula I or N-oxides thereof into the individual isomers.

24. A compound of the formula IA



wherein

r is 0 to 2, especially 0 or 1;

n is 0 to 3;

R₁ and R₂ together form a bridge as shown in subformula I***,



wherein either each of Z₁ and Z₂ is hydrogen, or one is hydrogen, the other methyl; the binding being achieved via the two terminal CH groups in subformula I*** and to the two adjacent carbon atoms binding R₁ and R₂ in formula IA, so that a six-membered ring is formed;

A, B, D and E are CH and T is N,

Q is methyl (preferably bound to A and/or D);

G is -C(=O)-, -CHF- or -CF₂-;

each of R_a and R_a' is hydrogen;

X is imino;

Y is 4-chlorophenyl, 4-tert-butyl-phenyl, 3,5-dimethyl-phenyl, 2-methyl-6-ethyl-phenyl, 3-isopropyl-5-methyl-phenyl, 3-ureido-phenyl, 3-chloro-4-methoxy-phenyl, 4-chloro-3-methoxy-phenyl, 3-methoxy-4-methyl-phenyl, 3-methoxy-4-ethyl-phenyl, 3-(trifluoromethylthio)-phenyl, 6-chloro-3-(trifluoromethylsulfonyl)-phenyl, 3-(N-methylcarbamoyl)-phenyl, 4-(N-tert-butylcarbamoyl)-phenyl, 3-(pyrazol-3-yl)-phenyl, 3-([1-methyl-pyrazol]-3-yl)-phenyl, 4-(tert-butoxycarbonyl)-phenyl, 3,5-bis(methoxycarbonyl)-phenyl, 3-vinyl-phenyl, 3,4- or 3,5-bis(trifluoromethyl)-phenyl, 3-chloro-4-methyl-phenyl, 3-bromo-4-methyl-phenyl, 3-bromo-4-ethyl-phenyl, 4-bromo-3-isopropyl-phenyl, 4-bromo-3-n-propyl-phenyl, 3-iodo-4-methylphenyl, 4-iodo-3-isopropyl-phenyl, 4-fluoro-3-trifluoromethyl-phenyl, 3-chloro-5-trifluoromethyl-phenyl, 4-chloro-3-trifluoromethyl-phenyl, 3-bromo-5-trifluoromethyl-phenyl, 4-bromo-3-trifluoromethyl-phenyl, 4-iodo-3-trifluoromethyl-phenyl, 3-bromo-5-(2,2,2-trifluoroethyl)-phenyl, 3-iodo-5-trifluoromethyl-phenyl, 3-methyl-5-trifluoromethylphenyl or 4-sulfamoyl-phenyl,

or (especially if n is other than 0) is 4-methylphenyl, 3-methylphenyl, 4-ethyl-phenyl, 3-ethyl-phenyl, 2-methylphenyl, 3- or 4-trifluoromethyl-phenyl, 2-chlorophenyl, 3-chlorophenyl or 3-fluoro-5-trifluoromethyl-phenyl,

or is 2-naphthyl; quinolin-6-yl; 5-methyl-pyridin-2-yl; 6-methyl-pyridin-2-yl; 4-methylpyrimidin-2-yl; 6-tert-butyl-pyrimidin-4-yl; 5-trifluoromethyl-pyridin-2-yl; 5-methoxy-pyridin-2-yl; 2,6-dimethyl-pyridin-4-yl or 4,6-dimethyl-pyridin-2-yl; 2,6-dimethyl-pyrimidin-4-yl; 5-bromo-pyridin-2-yl or 6-chloro-pyridin-3-yl;

or is 4-tertbutylcyclohexyl;

or an N-oxide thereof, wherein 1 or more nitrogen atoms carry an oxygen atom; or a salt thereof.

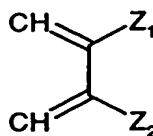
25. A compound of the formula IA according to claim 24,

wherein

r is 0 to 2, especially 0 or 1;

n is 0 to 3;

R_1 and R_2 together form a bridge as shown in subformula I^{***},



(I***)

wherein either each of Z_1 and Z_2 is hydrogen, or one is hydrogen, the other methyl;
the binding being achieved via the two terminal CH groups in subformula I*** and to the two adjacent carbon atoms binding R_1 and R_2 in formula IA, so that a six-membered ring is formed;

A, B, D and E are CH and T is N,

Q is methyl (preferably bound to A and/or D);

G is methylene or hydroxymethylene;

each of R_a and R_a' is hydrogen;

X is imino;

Y is 3-isopropyl-5-methyl-phenyl, 4-chloro-3-methoxy-phenyl, 3,4-bis(trifluoromethyl)-phenyl, 3-chloro-4-methyl-phenyl, 3-bromo-4-methyl-phenyl, 3-bromo-4-ethyl-phenyl, 4-bromo-3-isopropyl-phenyl, 4-bromo-3-n-propyl-phenyl, 3-iodo-4-methylphenyl, 4-iodo-3-isopropyl-phenyl, 4-fluoro-3-trifluoromethyl-phenyl, 3-chloro-5-trifluoromethyl-phenyl, 4-bromo-3-trifluoromethyl-phenyl, 4-iodo-3-trifluoromethyl-phenyl, 3-bromo-5-(2,2,2-trifluoroethyl)-phenyl, 3-iodo-5-trifluoromethyl-phenyl, 3-methyl-5-trifluoromethylphenyl or 4-sulfamoyl-phenyl,

or (if n is other than 0) is 4-methylphenyl, 3-methylphenyl, 4-ethyl-phenyl, 3-ethyl-phenyl, 2-methylphenyl, 3- or 4-trifluoromethyl-phenyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 4-chloro-3-trifluoromethyl-phenyl, 3-bromo-5-trifluoromethyl-phenyl or 3-fluoro-5-trifluoromethyl-phenyl,

or is 2-naphthyl; quinolin-6-yl; 5-methyl-pyridin-2-yl; 6-methyl-pyridin-2-yl; 4-methylpyrimidin-2-yl; 6-tert-butyl-pyrimidin-4-yl; 5-trifluoromethyl-pyridin-2-yl; 5-methoxy-pyridin-2-yl; 2,6-dimethyl-pyridin-4-yl or 4,6-dimethyl-pyridin-2-yl; 2,6-dimethyl-pyrimidin-4-yl; 5-bromo-pyridin-2-yl or 6-chloro-pyridin-3-yl;

or is 4-tertbutylcyclohexyl;

or an N-oxide thereof, wherein 1 or more nitrogen atoms carry an oxygen atom;

or a salt thereof.

26. A compound of the formula IA according to claim 24, where the compound is selected from the group consisting of the following compounds, or a pharmaceutically acceptable salt thereof:

1-(3-Bromo-4-methyl-anilino)-4-(pyridin-4-yl-methyl)-phthalazine (see example 13h below);
[4-(4-chloroanilino)phthalazin-1-yl]-(pyridin-4-yl)ketone;
and
[4-(4-chloroanilino)phthalazin-1-yl]-(1-oxypyridin-4-yl)methanol.

27. A compound of the formula IA according to claim 24,
wherein

r is 0;

n is 0;

R₁ and R₂ together form a bridge as shown in subformula I***,

wherein one of Z₁ and Z₂ is hydrogen, the other methyl;

the binding being achieved via the two terminal CH groups in subformula I*** and to the two adjacent carbon atoms binding R₁ and R₂ in formula IA, so that a six-membered ring is formed;

A, B, D and E are CH and T is N,

G is methylene;

X is imino; and

Y is 4-chlorophenyl, 4-chloro-3-methoxy-phenyl, 3-iodo-4-methyl-phenyl, 4-chloro-3-trifluoromethyl-phenyl, 3-bromo-5-trifluoromethyl-phenyl or 4-bromo-3-trifluoromethyl-phenyl;
or an N-oxide thereof, wherein 1 or more nitrogen atoms carry an oxygen atom;
or a salt thereof.

28. A compound of the formula IA according to claim 24,
wherein

r is 1;

n is 0;

R₁ and R₂ together form a bridge as shown in subformula I***,

wherein each of Z₁ and Z₂ is hydrogen;

the binding being achieved via the two terminal CH groups in subformula I*** and to the two adjacent carbon atoms binding R₁ and R₂ in formula IA, so that a six-membered ring is formed;

A, B, D and E are CH and T is N,

G is methylene;

X is imino; and

Y is 4-chloro-3-trifluoromethyl-phenyl, 3-chloro-5-trifluoromethylphenyl, 4-tert-butylphenyl, 3-bromo-4-methyl-phenyl, 3-bromo-4-ethylphenyl or 4,5-bis(trifluoromethyl)-phenyl; or an N-oxide thereof, wherein 1 or more nitrogen atoms carry an oxygen atom; or a salt thereof.

29. A compound of formula IA, or a pharmaceutically acceptable salt thereof, according to any one of claims 24 to 28 for use in a method for the diagnostic or therapeutic treatment of the human or animal body.

30. A pharmaceutical composition, comprising a compound of formula IA or a pharmaceutically acceptable salt thereof according to any one of claims 24 to 28, together with at least one pharmaceutically acceptable carrier.

31. Use of a compound of formula IA according to any one of claims 24 to 28, or a pharmaceutically acceptable salt thereof, for the preparation of a pharmaceutical composition for the treatment of a disease which responds to an inhibition of angiogenesis.

32. Use of a compound of formula I according to any one of claims 24 to 28, or a pharmaceutically acceptable salt thereof, for the preparation of a pharmaceutical composition for the treatment of a disease which responds to an inhibition of VEGF-receptor kinase.